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A new species of *Homoneura* (*Euhomoneura*) from northern China (Diptera, Lauxaniidae)

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Abstract

Homoneura (*Euhomoneura*) *yanqingensis* **sp. n.** is described as new to science and *Homoneura* (*E.*) *shatalkini* Papp, 1984 is recorded from China for the first time. Photographs and illustrations are provided for both of these species, including genitalia. A key is provided to separate the Chinese species of the subgenus *Euhomoneura*.

Keywords

Euhomoneura, *Homoneura*, new record, new species, Palaearctic region

Introduction

The subgenus *Euhomoneura* Malloch, 1927 is a small subgenus of the genus *Homoneura* (Wulp, 1891), which can be separated from other subgenera by the following key features: the lower margin of the face being about three times as wide as height of the gena and the anteriormost dorsocentral seta being at or before the transverse suture of the mesonotum. It includes 12 described species with three in China (Shiet al. 2012).

One species *Homoneura* (*Euhomoneura*) *yanqingensis* sp. n. is described as new to science and one species *Homoneura* (*E.*) *shatalkini* Papp, 1984 is newly recorded in China. A key is provided to separate the Chinese species of the subgenera *Euhomoneura*.

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Materials and methods

General terminology follows Gaimari and Silva (2010) and Shi and Yang (2014). Genitalia preparations were made by removing and macerating the apical portion of the abdomen in cold saturated NaOH for one hour, then rinsing and neutralizing them for dissection and study. After examination in glycerin, genitalia were transferred to fresh glycerine and stored in a microvial pinned below each specimen. Specimens examined were deposited in two collections: entomological collections of China Agricultural University, Beijing (**CAUC**) and Inner Mongolia Agricultural University, Hohhot (**IMAU**).

Taxonomy

Homoneura (*Euhomoneura*) *shatalkini* Papp, 1984

Figures 1–12

Homoneura shatalkini Papp, 1984a: 167. Type locality: Japan. Shatalkin, 2000: 29.

Specimens examined. CHINA: Ningxia Province (IMAU): 1♂, Liupan Mountain, 7–8.vii.2008, Jingxian Liu. **CHINA: Jilin Province** (IMAU): 2♂♂, 2♀♀, Changbai Mountain, South slope, 1520–1720 m, 1.viii.2004, Xingyue Liu. **CHINA: Shaanxi Province** (IMAU): 1♂, Zhouzhi, Houzhenzi, 1235 m, 11.viii.2013, Wencheng Chang; 1♂, Zhouzhi, Laoxiancheng, 1846 m, 19.viii.2014, Xiumei Lu; 2♂♂, 2♀♀, Zhouzhi, Laoxiancheng, 1808 m, 12.viii.2013, Wencheng Chang (2 males, 2 females: IMAU); 1♂, Feng County, Huangniupu, light trap, 1501 m, 21.viii.2013, Yuqiang Xi; 1♂, Zhouzhi, Houzhenzi, 1235 m, 11.viii.2013, Xuankun Li; 2♂♂, Zhouzhi, Taibai Mountains, 1648 m, 17.viii.2014, Xunkun Li.

Distribution. New record to China (Ningxia, Jilin, Shaanxi); Japan, Russia.

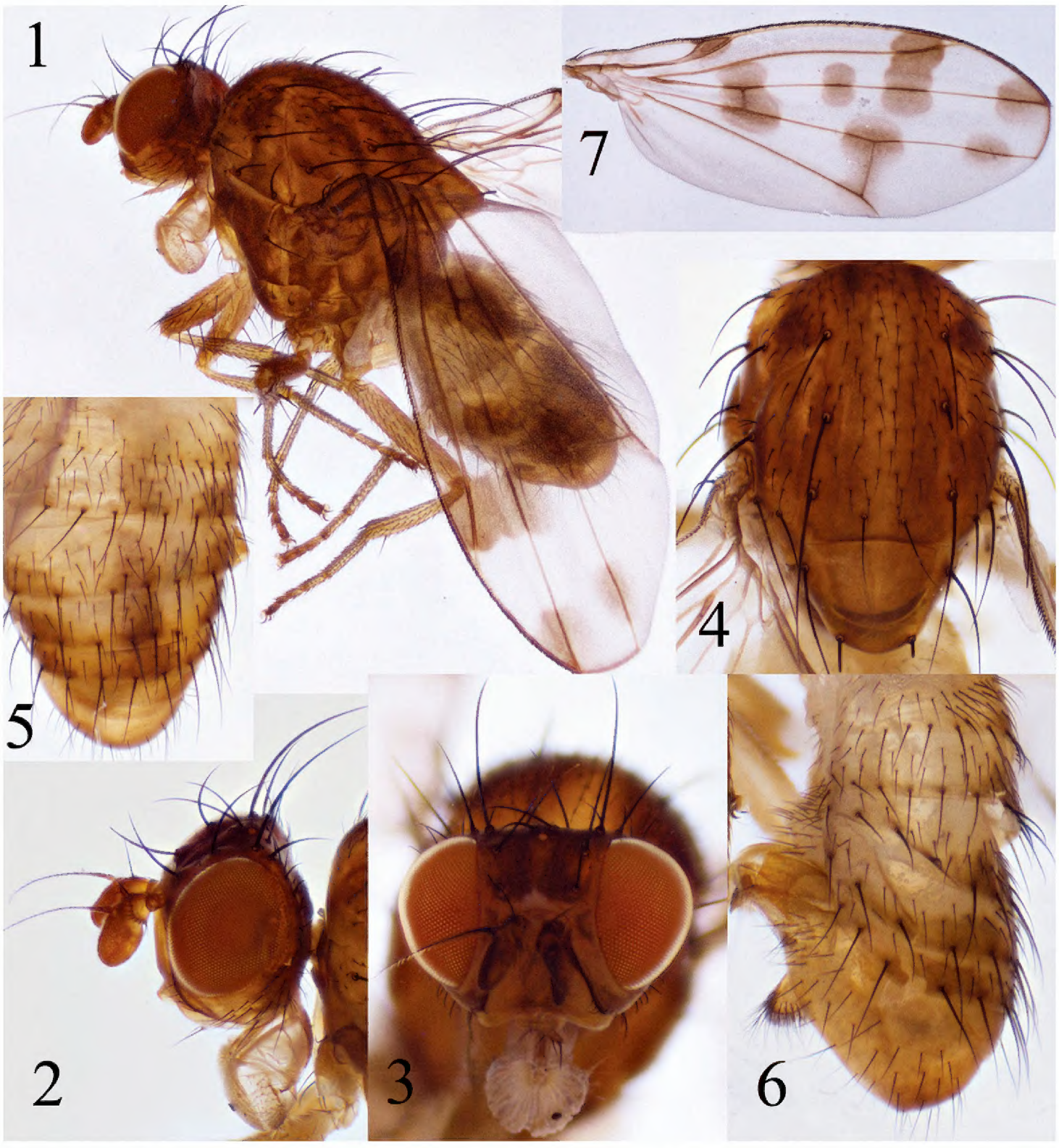
Homoneura (*Euhomoneura*) *yanqingensis* sp. n.

http://zoobank.org/EB333015-A744-430C-8448-B06F98ACBB89

Figures 13–24

Type material. Holotype ♂, **CHINA: Beijing** (CAUC): Yanqing County, Songshan, 8.ix.2009, Xiaoyan Liu. Paratypes: **CHINA: Beijing** (CAUC): 7♂♂, 8♀♀, data same as holotype. **CHINA: Shaanxi Province** (IMAU): 1♂, Baoji City, Feng County, Huangniupu, 1501 m, 21.viii.2013, Yuqiang Xi; 1♂, 1♀, Zhouzhi, Houzhenzi, 1235 m, 11.viii.2013, Wencheng Chang; 1♀, Zhouzhi, Laoxiancheng, 1916 m, 19.viii.2014, Xiumei Lu.

Diagnosis. Body yellow. Arista pubescent. Palpus with brown apex. Mesonotum with four strong and long acrostichal setae (two before suture, two after suture). All femora each with a brown irregular apicoventral spot and all tasomeres 3–5 brown. Wing hyaline, with five brown isolated spots.

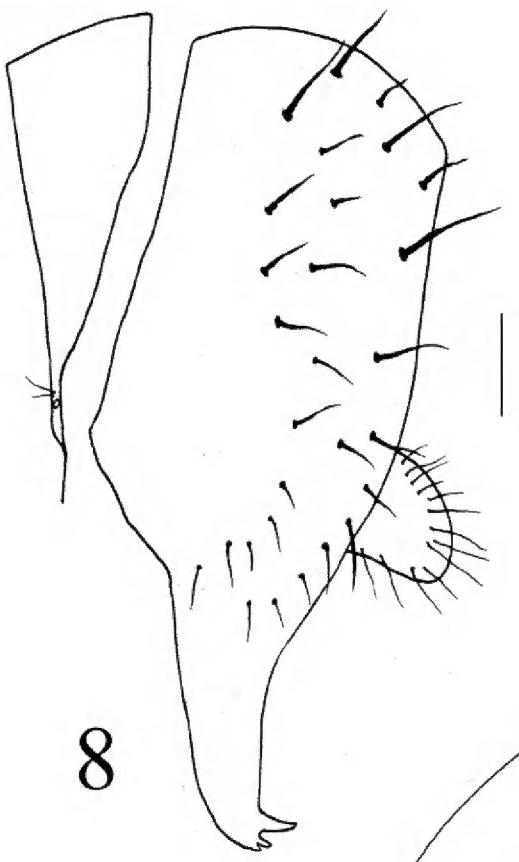


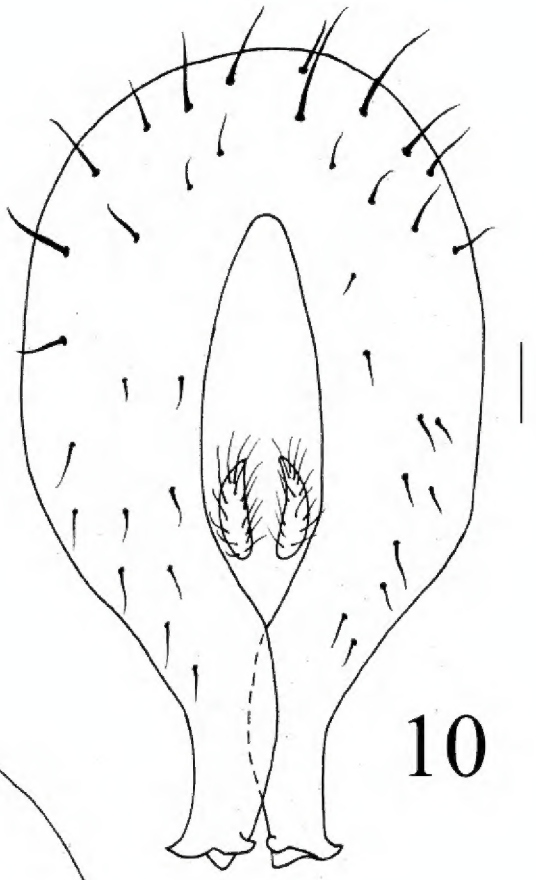
Figures 1–7. *Homoneura* (*Euhomoneura*) *shatalkini* Papp, 1984. Male from Shaanxi. **1** Habitus, lateral view **2, 3** Head, laeral and anterior view **4** Thorax, dorsal view **5, 6** Abdomen, dorsal and lateral view **7** Wing.

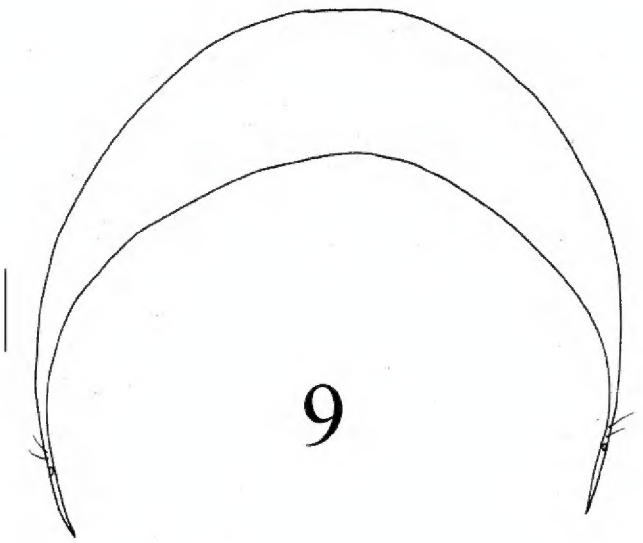
Description. Male. Body length 3.8–4.2 mm. Wing length 3.7–4.3 mm. Female. Body length 3.8–4.2 mm.Wing length 3.7–4.3 mm.

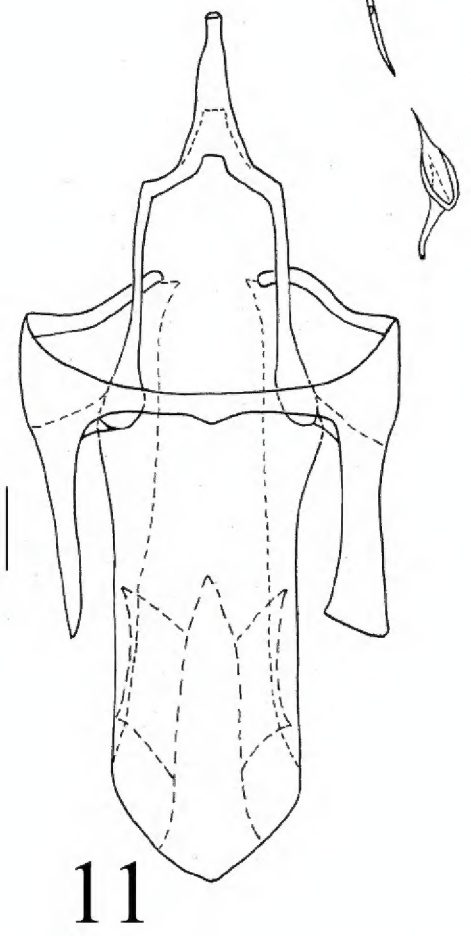
Head pale yellow. Frons with sparse grayish white pruinosity, longer than wide and parallel-sided; ocellar triangle brown, ocellar setae well developed, longer than anterior fronto-orbital setae, anterior fronto-orbital setae shorter than length of posterior one; gena about 1/6 height of eye; antenna yellow; 1st flagellomere yellowish brown, 1.5 times longer than high; arista dark brown except for pale brownish base, ray pubescent, with longest ray as long as 1/3 height of 1st flagellomere. Proboscis yellow, palpus yellow except for brown apex.

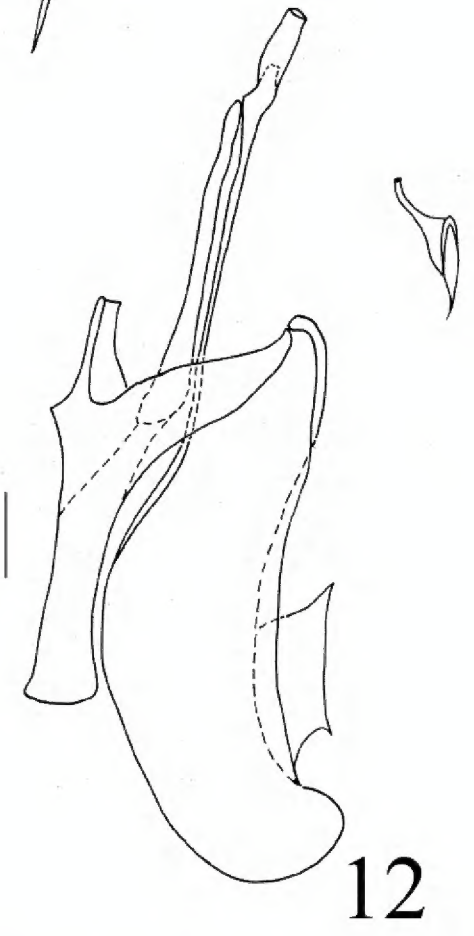
Thorax yellow. Mesonotum with 1+2 dorsocentral setae; acrostichal setae in irregular six rows, with four strong and long acrostichal setae (two before suture, two after suture); a pair of prescutellar setae shorter than 1st post-sutural dorsocentral setae. Leg mostly



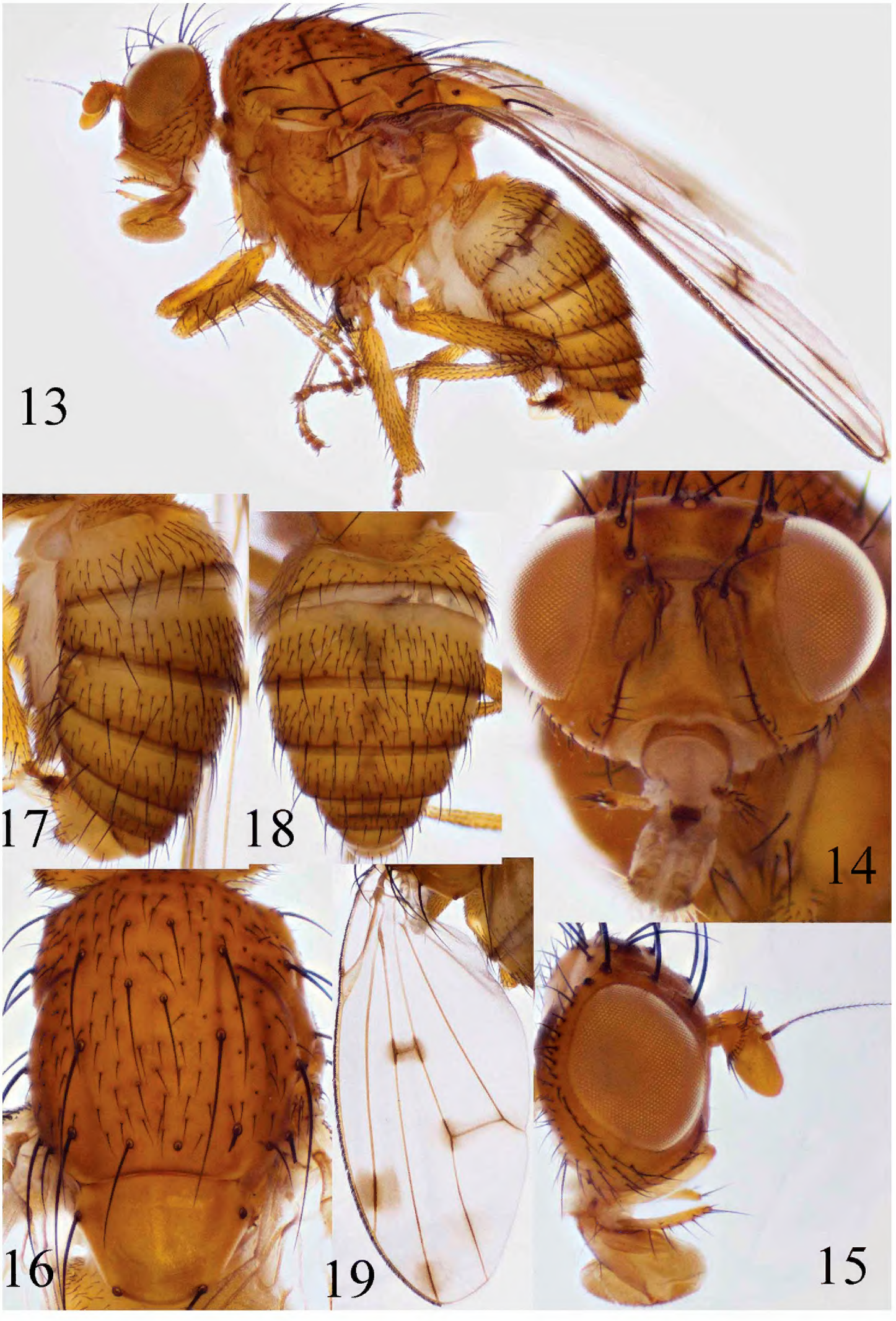








Figures 8–12. *Homoneura* (*Euhomoneura*) *shatalkini* Papp, 1984. Male from Shaanxi. Male genitalia. **8** Syntergosternite and epandrial complex, lateral view **9** Syntergosternite, anterior view **10** Epandrium, posterior view **11** Aedeagal complex, ventral view **12** Aedeagal complex, lateral view. Scale bar: 0.1 mm.



Figures 13–19. *Homoneura* (*Euhomoneura*) *yanqingensis* sp. n. Paratype male from Shaanxi. **13** Habitus, lateral view **14, 15** Head, anterior and lateral view **16** Thorax, dorsal view **17, 18** Abdomen, dorsal and dorsal view **19** Wing.

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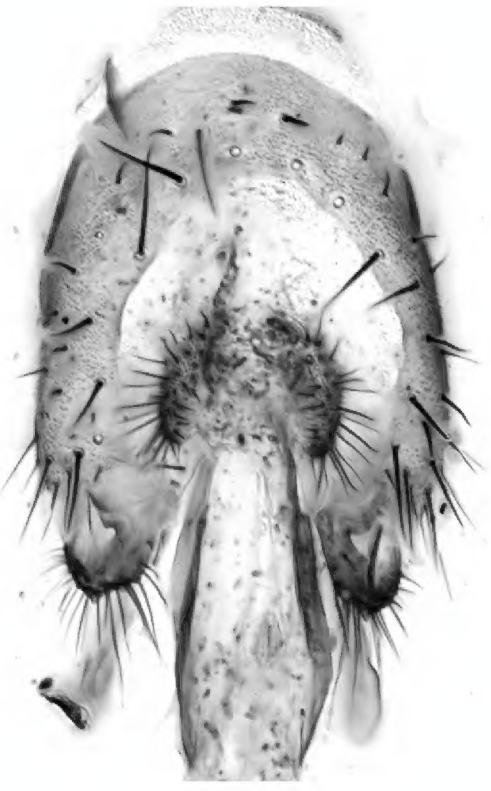

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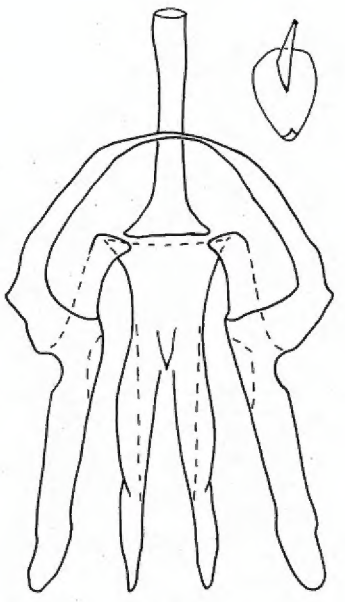

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Figure 20–24. *Homoneura* (*Euhomoneura*) *yanqingensis* sp. n. Paratype male from Shaanxi. Male genitalia. **20** Syntergosternite and epandrial complex, lateral view **21** Syntergosternite, anterior view **22** Epandrium, posterior view **23** Aedeagal complex, ventral view **24** Aedeagal complex, lateral view. Scale bar: 0.1 mm.

yellow, all femora each with a brown irregular apicoventral spot and all tasomeres 3–5 brown. Fore femur with 6–7 posterodorsal setae, 4–5 posterovental seate, and ctenidium with 11–12 short setae; fore tibia with one strong preapical anterodorsal seta and one short apicoventral seta. Mid femur with five anterior setae and one short apical posterior seta; mid tibia with one strong preapical anterodorsal seta and one short apicoventral seta. Hind femur with one preapical anterodorsal seta and three anteroventral setae; hind tibia with one preapical anterodorsal seta and one short apicoventral seta. Wing hyaline, with five brown isolated spots: preapical spot on R_{2+3}, apical spot on R_{4+5}, subapical spot on M_1, a cloud on crossvein r-m, and a narrow stripe-like spot on crossvein dm-cu (anterior margin and posterior margin darker than central area); pale brown along the radial sector; subcostal cell pale brown; costa with 2nd, 3rd and 4th sections in proportion of 4.5:1.8:1; r-m beyond middle of discal cell; ultimate and penultimate sections of M_1 in proportion of 1:1.6; ultimate section of CuA_1 about 1/6 of penultimate. Halter yellow.

Abdomen pale yellow, tergites 2–5 (female 2–6) with narrow brown posterior margin, and tergite 3–5 (female 3–6) brownish median spot or absent. Male genitalia: syntergosternite circular with a pair of ventral processes; epandrium broad with dense apical setae, surstylus narrow but slightly broaden at apex; hypandrium slender U-shaped; postgonite long cylindrical; aedeagus broad at middle and bluntly rounded in lateral view, aedeagal apodeme shorter than length of aedeagus.

Etymology. The new species is named after collection locality.

Distribution. China (Beijing, Shaanxi).

Comments. The new species is similar to *Homoneura* (*Euhomoneura*) *balluca* Sasakawa, 1992 from Malaysia. It can be separated from the latter by the mesonotum having brown stripes, the coxa and femora of legs being brown and the tibiae each having brown rings on both apex, and the abdominal tergite 6 having a pair of brown lateral spots.

A key to the five known species of the subgenus *Euhomoneura* in China

1 Frons black with yellowish grey pruinosity; gena reddish yellow with black spots; male abdominal tergites greyish black without spots, but female abdominal tergites with a pair of reddish brown spots on anterolateral corners ..... ***H. (E.) variipennis* Czerny**

– Frons yellow; gena yellow; abdomen yellow with pale brown spots or absent **2**

2 Wing with two brown spots on R_{4+5} between vertical level of *r-m* and apical spot **3**

– Wing without brown spots on R_{4+5} between vertical level of *r-m* and apical spot **4**

3 Arista short plumose; male genitalia: surstylus with a sharp and a blunt apical protuberance in lateral view, aedeagus without rectangular dorsal sclerites (see Gao et al. 2003: 194) ..... ***H. (E.) minuscula* Gao, Yang & Gaimari**

– Arista pubescent; male genitalia: surstylus with three sharp processes, aedeagus with a pair of nearly rectangular dorsal sclerites in lateral view (see Papp, 1984: 167) ..... ***H. (E.) shatalkini* Papp**

4 Mesonotum with acrostichal setae in irregular six rows, especially four strong and long acrostichal setae (two before suture, two after suture); male genitalia: surstylus blunt without tip and aedeagus separated at apex in posterior view ..... ***H. (E.) yanqingensis* sp. n.**

– Mesonotum without strong central acrostichal setae; male genitalia: surstylus with tip projecting and upturned and aedeagus crossed at apex in posterior view (see Gao et al. 2003: 195) ..... ***H. (E.) xiaolongmenensis* Gao, Yang & Gaimari**

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